

CONCLUSIONS: Our initial experience supports that HBOT is an effective treatment for patients who develop brain radiation necrosis after radiosurgery. HBOT may obviate the need for surgery in patients with progressive symptoms and mass effect. As we gain more experience with this treatment modality, we hope to identify factors (e.g., lesion volume) that would predict response to HBOT.

Q 114 HYPERBARIC OXYGEN THERAPY FOR DIABETIC LEG ULCERS - A DOUBLE-BLIND RANDOMISED-CONTROLLED TRIAL A Abidia, G Kuhan, G Laden, H Bahia, B Johnson, A Wilkinson, P Renwick, E Masson*, P T McCollum. Academic Vascular Unit and *Department of Diabetic Medicine, University of Hull & Hull Royal Infirmary, Hull HU3 2JZ, UK.

BACKGROUND: 14-24% of diabetic patients with ischaemic leg ulcers will require an amputation. Despite the progress of medicine and much effort toward amputation prevention in the last decade, the incidence of lower limb amputation in such patients continues to rise. We aimed to evaluate the role of hyperbaric oxygen therapy in the management of this group of patients.

METHODS: Eighteen diabetic patients with ischaemic, non-healing leg ulcers were recruited in a double-blind study. Patients were randomly assigned either to receive 100% oxygen (treatment group) or air (control group), at 2.4 atmospheres of absolute pressure for 90 minutes daily, for a total of 30 treatments. Wounds surface areas were measured at baseline and then at 2, 4, 6, 12 weeks and 6months. Quality of life was assessed using the generic form SF-36 Health Survey.

RESULTS: At 12 weeks, healing with complete epithelialisation was achieved in 13 out of 19 ulcers in the treatment group compared to 4 out of 14 ulcers in the control group. The median decrease of the wound areas in the treatment group was 96 percent (SD ± 36) and in the control group was 41 percent (SD ± 39), p = 0.043 (Mann-Whitney). There was no difference in major amputation rate between the groups. Patients in the treatment group reported significant improvement in vitality, mental health and general health as assessed by the SF-36 (p = 0.01, 0.05 and 0.008 respectively).

CONCLUSION: Hyperbaric oxygen therapy enhanced the healing potential of ischaemic, non-healing diabetic leg ulcers and may be used as a valuable adjunct to conventional therapy when reconstructive surgery is not possible.

Q 115 DOES HYPERBARIC OXYGEN POTENTIATE PROSTATE CANCER GROWTH OR RECURRENCE? NB Hampson, KJ O'Reilly, L Geddeis, JM Corman. Departments of Hyperbaric Medicine and Urology, Virginia Mason Medical Center, Seattle, Washington.

INTRODUCTION: External beam radiation therapy is a common treatment for prostate cancer, although it results in hemorrhagic cystitis in up to 5% of patients. Hyperbaric oxygen (HBO2) is effective therapy for radiation-induced hemorrhagic cystitis. Because the mechanism of action of HBO2 is via angiogenesis, the effect on the underlying malignancy is of great interest. This patient population is ideally suited to examine whether HBO2 has an effect on tumor growth. The purpose of our study was to assess the rate of prostate cancer growth or recurrence after HBO2 therapy administered for radiation-induced cystitis.

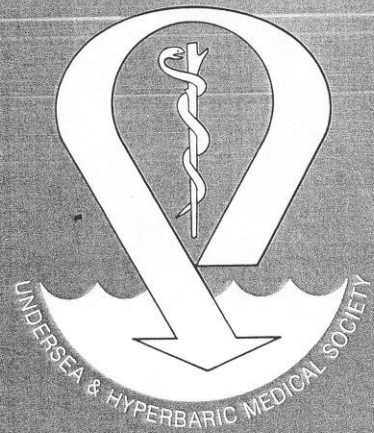
METHODS: Medical records of patients who received HBO2 for radiation-induced cystitis at our institution from 1988-1998 were retrospectively reviewed. Inclusion criteria for this study included a prior diagnosis of prostate cancer treated primarily with external beam radiation. In such patients, prostate specific antigen (PSA) levels prior to and following HBO2 were reviewed.

RESULTS: Of 49 patients treated for radiation-induced hemorrhagic cystitis, 36 received their radiation therapy for prostate cancer. Among those 36 patients, 8 had sufficient PSA data available for review. The mean age at diagnosis of prostate cancer was 69 years (range 55-79). The mean time from radiation therapy until HBO2 was 65 months (range 26-134).

Pt.	PSA Velocity Pre-HBO2	PSA Velocity Post-HBO2
1	1.9 (ng/ml/yr)	0.0 (ng/ml/yr)
2	0.0	0.0
3	0.0	0.0
4	1.0	1.5
5	0.4	0.1
6	0.0	0.0
7	0.0	0.0
8	2.0	1.8

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